needs. Four principles are prominent: (1) "The purpose is not to equalize taxes for education throughout the state, but only to equalize them down to a determined minimum;" (2) "Whatever aid is granted to equalize burdens should be granted only on formal application, accompanied by information as to conditions;" (3) "Such grants should bear some direct relation to the educational efforts made by a community;" (4) "All such grants ought to be regarded as temporary assistance until such needy communities can become able to properly maintain their own schools." The whole study emphasizes helping most the small and worthy districts in special need, but insists upon encouraging local schools to be self-supporting.

This study is too verbose; it abounds in needless repetition; it is cumbered with minute details not essential. Fewer data, more carefully selected, more thoroughly studied and discussed, would have strengthened the work. But, in spite of this, the author has contributed a most valuable work. It should go to every state superintendent, to the committee on education in every state legislature, and to all who may influence the distribution of school funds.

JUNIUS L. MERIAM

TEACHERS COLLEGE
University of Missouri

---

*Argumentation and Debate.* By CRAVEN LAYCOCK AND ROBERT LEIGHTON SCALES. New York: The Macmillan Co.

The call for a purely intellectual sport as a foil and an offset to the overwhelming athleticism in our colleges has developed within recent years the intercollegiate debate. As a result, there has been a "growing recognition of the importance of argumentation as a separate subject of study in American colleges." In reality a new subject has been created and added to the curriculum, an eclectic creation made up from fragments of three or four older sciences: rhetoric, formal logic, legal procedure, and oratory. The textbooks that have resulted from this new demand have differed from one another in just so far as they have emphasized one or another of these primary elements. One recent book might be placed on the same shelf as the logics, another might be easily classed with books on court procedure, and still another is but Part IV of the practical rhetoric.

In *Argumentation and Debate,* by Laycock and Scales, an attempt has been made to find a judicious mean between these extremes, to unify the subject, and to make of the four fragments of sciences a distinct art. To what extent they have succeeded opinions may differ, but with at least one who has taught the book to two classes in several divisions the conviction is strong that no new art "demanding investigation for its own sake" has been evolved. The desire for immediate utility dominates the book. It is not logic, or rhetoric, or court procedure; in the last analysis it is a handbook made up of component elements taken from all three, a handbook for the training of intercollegiate debaters. The authors have not realized it, but the decision of the judges has been continually before their minds. The demand of the day is that the department of oratory shall furnish a winning team, and accordingly this book has been evolved for developing debating material.

Parts of the book are excellently done. The chapter on brief-drawing is the best to be found anywhere; the advice in the appendix is practical and helpful. But the book, on the whole, is diffuse. The author takes a page to say: "When you collect

materials, always use a notebook." The whole chapter on preliminary reading could be condensed into three pages, and page after page could be reduced one-half. There is a legal tone throughout. The examples are almost all of them taken from the speeches of lawyers, often in technical points which the average student finds difficult to apply.

Yet with all its faults the book is perhaps the most practical of the compilations that have thus far treated the subject. It seeks constantly for definite results, and in the hands of the skilful teacher it may lead the student to real proficiency in the art with which it deals.

FRED LEWIS PATTEE

STATE COLLEGE, PENNSYLVANIA

---

*The Elements of Geometry.* By WALTER N. BUSH AND JOHN B. CLARKE. New York: Silver, Burdett & Co., 1905. Pp. xii + 355.

It is refreshing to pick up a geometry cast in a newer mold. The authors of *The Elements of Geometry*, Bush and Clarke, have discarded the usual division into books and have arranged the theorems in twenty-six groups. Some idea of the method of arrangement may be gleaned from the titles of some of the groups: the Group of Adjacent and Vertical Angles; the Parallel Group; the $2n - 4$ Right Angle Group; the Group of Isosceles and Scalene Triangles; the Group of Congruent Triangles; Group of Similar Figures.

The propositions are placed on the page in this fashion:

IV. 4. *In any triangle the greater triangle lies opposite the greater side.*

An attempt has been made to make the statement of theorems as short as possible. This has not always resulted well, as in the statement: "XXVI—8. The area of a spherical triangle equals its spherical excess." The author is using the right angle as unit. This expresses the area of a spherical triangle in right angles. Many theorems are broken up into several simpler ones, which certainly adds much to the ease with which a secondary pupil reads the book. Another excellent feature is the tabulation of the theorems at the close of each group, a great aid to reference and review. On p. 99 we find a concise statement in symbols of the important theorems on the properties of the angles and lines of a triangle. Scattered through the book are a large number of very excellent theorems and exercises to be wrought out by the pupil.

Symbols are extensively used, giving an open look to the page and a clear-cut and concise look to the proof. Most of the diagrams stand demurely on the page in the orthodox style for a textbook. In solid geometry there has been a pleasing and really valuable intermingling of photographs, plane drawings, and shaded drawings combining the advantages of all and free from the evils due to the exclusive use of any one style.

Among the terms used may be noted: "congruent," "join," "mid-join," "mid-perpendicular,' "4-side," "isoangular" (a triangle having two equal angles). A purist in language might object to this last mongrel word, "isoangular," made from Greek and Latin stems. The name "isosceles"—equal legs—is descriptive; but equal-angles is not so fitting. Many of the definitions are an improvement upon those usually given, but others are defective, a few of which may be noted. A line is defined and then the definition is explained. Similar figures are defined as "figures of the same shape," which merely gives another name for the idea, but does not define the